

REMARKS

Claims 1 to 12 and 16 to 22 are all the claims pending in the application, prior to the present Amendment.

Claim 17 has been objected to because of a typographical error. Applicants have amended claim 17 to correct this error.

Claims 1, 4, and 16-17 have been rejected under 35 U.S.C. 102(b) as being anticipated by US 6,159,556 to Moller et al.

Applicants submit that Moller et al do not disclose or render obvious the subject matter of claim 1 as amended above and, accordingly, request withdrawal of this rejection.

Claims 7 and 8 have not been included in the above rejection. Applicants have amended claim 1 to incorporate recitations from claims 7 and 8 and to further recite that the vinyl monomer (b2) is selected from the group consisting of an aliphatic vinyl hydrocarbon, an alicyclic vinyl hydrocarbon and an aromatic vinyl hydrocarbon, as disclosed at page 14, lines 14 to 17 of the present specification.

The Examiner states that Moller et al disclose an aqueous dispersion of a powder coating comprising a solid pulverulent component (A) and an aqueous component (B), in which (A) is an epoxide-containing binder with glycidyl-containing monomers and (B) is a nonionic thickner (a), which has a hydrophilic structure and hydrophobic groups and states further that the hydrophilic structures are polyetherpolyurethanes, prepared particularly preferably with unsubstituted or alkyl substituted 1,6-hexamethylene diisocyanate, which serves as the linking of the hydroxyl-terminated polyether units with one another and for the linking of the polyether units with the hydrophobic end group units, which may be monofunctional alcohols and/or amines having long

chain aralkyl radicals, such as octylphenyl or nonylphenyl. However, as the Examiner correctly indicates, the invention claimed in claims 7 and 8 are not anticipated by Moller et al because such is not disclosed by Moller et al.

Since claim 1 as amended above includes the recitations of claims 7 and 8, applicants submit that it is clear that Moller et al do not anticipate amended claim 1.

In view of the above, applicants submit that Moller et al do not disclose the subject matter of claim 1 as amended above and, accordingly, request withdrawal of this rejection.

Claims 1-2, 4-8, and 16-17 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 2003/0220444 to Furuta et al.

In addition, claim 8 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al.

Applicants submit that Furuta et al do not disclose or render obvious the subject matter of claim 1 as amended above and, accordingly, request withdrawal of this rejection.

With respect to the anticipation rejection, the Examiner states that Furuta et al disclose a water-dispersed slurry coating, comprising: (A) a particulate comprising (al) a resin having an active hydrogen; (B) a reactive surfactant having at least one of an optionally blocked isocyanate group and an epoxy group; and (M) an aqueous medium in which (A) and (B) are contained and states further that the surfactant (B) is further disclosed as comprising a hydrophobic moiety and a hydrophilic moiety.

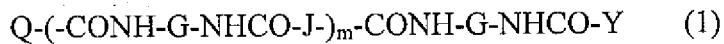
In particular, the Examiner indicated that, as to claims 7-8, Furuta et al disclose the surfactant (B) as a urethane resin having at least one of an optionally blocked isocyanate group and an epoxy group comprising: (b3) an addition reaction product of (b1) a monohydric phenol

or a monohydric aromatic alcohol and at least one of (b2) a vinyl monomer, or an alkylene oxide adduct of the addition reaction product; (b4) an organic diisocyanate; and (b5) at least one of a diol and a diamine each having a polyoxyalkylene chain; and optionally a chain terminating agent and further indicates that the same chain terminating agent as the blocking agent of the instant invention is used and further mentions the urethane resin represented by the general formulae (1) of the reference specification.

However, although Furuta et al disclose the reactive surfactant (B) preferably comprises a hydrophobic moiety and a hydrophilic moiety and preferably has at least one of the optionally blocked isocyanate group and the epoxy group in the hydrophobic moiety, as disclosed at paragraph [0013], lines 1-5, Furuta et al do not disclose a surfactant (B) having at least one of the optionally blocked isocyanate group and the epoxy group in the hydrophilic moiety and not having such a group in the hydrophobic moiety.

This is, of course, clear from the fact that in the general formula (1) of Furuta et al, Q, the hydrophobic moiety, represents a residue of (b3) an addition reaction product of (b1) a monohydric phenol or a monohydric aromatic alcohol and at least one of (b2) a vinyl monomer having an optionally blocked isocyanate group and (b2') a vinyl monomer having an epoxy group, or an alkylene oxide adduct of the addition reaction product, as disclosed in paragraph [0072] of Furuta et al.

On the other hand, as claimed in claim 1 of the present application, the reactive surfactant (B) comprises one or more of compounds represented by the general formulae (1) or (2);



wherein, Q, which includes the hydrophobic moiety, represents a residue of (b3) the addition reaction product of (b1) the monohydric phenol or the monohydric aromatic alcohol and (b2) the vinyl monomer according to need, or the alkylene oxide adduct of the addition reaction product, wherein the vinyl monomer (b2) is selected from the group consisting of an aliphatic vinyl hydrocarbon, an alicyclic vinyl hydrocarbon and an aromatic vinyl hydrocarbon, which means that a residue of (b3) included in the hydrophobic moiety as designated Q does not include any of the optionally blocked isocyanate group and the epoxy group.

In other words, the surfactant (B) in accordance with the present invention does have at least one of the optionally blocked isocyanate group and the epoxy group in the hydrophilic moiety and does not have such a group in the hydrophobic moiety.

Since Furuta et al do not disclose a surfactant (B) having at least one of the optionally blocked isocyanate group and the epoxy group in the hydrophilic moiety and not having such a group in the hydrophobic moiety, it is clear that Furuta et al do not anticipate claim 1.

Further, with respect to the obviousness rejection of claim 8, whose recitations now appear in claim 1, the Examiner has taken the position that Furuta et al differ, if at all, only with respect to the variable "m." However, as can be seen from the above discussion, Furuta et al do not suggest a surfactant (B) having at least one of the optionally blocked isocyanate group and the epoxy group in the hydrophilic moiety and not having such a group in the hydrophobic moiety.

Still further, the present specification contains evidence of unexpected results as compared to Furuta et al.

As mentioned above, claim 1 claims a water-dispersed slurry coating, comprising: (A) particulates as claimed and (B) a reactive surfactant as claimed. The results obtained by the present invention are exemplified in the Examples of the present specification and are compared to results obtained by using a reactive surfactant (B) corresponding to the reactive surfactant (B) of Furuta et al.

In particular, Comparative Synthesis Example 2 of the present specification corresponds to the reactive surfactant (B) according to the invention of Furuta et al, particularly to Synthesis Example 1 of Furuta et al. The reactive surfactant (B) of Comparative Synthesis Example 2 of the present specification was employed in Comparative Examples 2, 6, 10 and 14 of the present specification, and the results are shown in Tables 1-4, respectively, of the present specification. As can be seen from Tables 1-4, among the various results, evaluation for water resistance is remarkably good with the Examples of the present invention compared to the Comparative Examples 2, 6, 10 and 14 shown in Tables 1-4.

There is a substantial difference between the invention of Furuta et al and that of the present application and some prominent results including water resistance are achieved by the present invention.

In view of the above, applicants submit that Furita et al do not disclose or render obvious the subject matter of claim 1 as amended above and, accordingly, request withdrawal of these rejections.

Applicants have added new claims 23 to 25, with claim 23 being independent and claims 24 and 25 depending therefrom. Claim 23 is based on the recitations of previous claims 1, 9 and 10 and further recites that the vinyl monomer (b2) is selected from the group consisting of an

aliphatic vinyl hydrocarbon, an alicyclic vinyl hydrocarbon and an aromatic vinyl hydrocarbon, as disclosed at page 14, lines 14 to 17 of the present specification.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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